

REMARKS

Claims 1-32 are pending in the application. In view of the foregoing amendments and the following remarks, Applicants respectfully request reconsideration, reexamination, and allowance of the above-captioned application.

Examiner Cole is thanked for the courtesies extended to Sally Ferrett during the personal interview conducted on September 22, 2003.

During the interview, the differences between the claimed methods and materials and the *Ruffo et al.* and *Matsumura et al.* materials and the processes were discussed. Further details of the differences are set forth in the following paragraphs.

Rejections under 35 U.S.C. § 102 and § 103

Page 2 of the Office Action set forth a rejection of Claims 1-3, 7-10, 29, and 31 as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over *Ruffo et al.* Page 5 of the Office Action sets forth a rejection of Claims 4-6 and 11-15 as being obvious over *Ruffo et al.*

Claim 1 is directed to an absorbent material which includes a mat of dry-laid cellulose fibres integrated with an air-laid non-woven gauze comprised of reinforcing textile fibres. Claim 1 further recites that the air-laid non-woven gauze is formed with an air-doffing apparatus having at least one carding element to provide a porous, penetrable gauze layer, and that the absorbent material is obtained by directly dry-laying the cellulose fibres on the newly formed gauze of textile fibres so that the cellulose fibres achieve a sufficient bonding with the textile fibres without any bonding agent.

As discussed in the specification at page 4, the claimed method of air-laying the textile fibers using an air-doffing apparatus having at least one carding element creates a porous, easily penetrated non-woven gauze. One reason is that the carding element aligns the textile fibers so that they are generally aligned in one direction. Further, the card reduces the number of fiber clumps which are laid on the wire. As a result, the non-woven gauze is more easily penetrated by the short fibers, allowing the resulting mat to be sufficiently bonded without any bonding agent.

Ruffo et al. does not disclose a method which includes air forming textile fibers with an air-doffing apparatus on a wire to produce a non-woven gauze, the air-doffing apparatus having at least one carding element.

In the *Ruffo et al.* process a batt of carded rayon 335 is provided and is directed to a lickerin 338. See column 17, lines 65-69. This batt appears as the Staple Fibers 335 in Figure 1. Once the fibers are removed from the batt by the lickerin 338, a flow of air conveys the rayon fibers into the mixing zone 334, where they are mixed with the short fibers from the pulp 340. The air stream conveys the long and short fibers in a random orientation onto the condenser in the form of a web. See column 18, lines 50-55 and 60-65. The resulting web is treated to bond the web and to provide the required strength and coherency characteristics. See column 12, line 61 - column 13, line 5 and columns 13-14 generally. Nor is there any indication that it would be desirable to include a carding element in the *Ruffo et al.* apparatus or to align the long fibers. Instead, the *Ruffo et al.* fibers are mixed together in an air stream and deposited in a random orientation.

Further, *Ruffo et al.* produces a mat which requires subsequent bonding treatment. *Ruffo et al.* also provides no guidance for modifying its process to include a carding element in an air-doffing apparatus, or for producing a mat which does not require subsequent bonding. For at least these reasons, Claim 1 is neither anticipated nor obvious based on the disclosure of *Ruffo et al.*

Dependent Claims 2-15, 29, and 31 are allowable over *Ruffo et al.* for at least the same reasons that Claim 1 is allowable.

Page 3 of the Office Action set forth a rejection of Claims 1-32 under 35 U.S.C. § 103(a) based on *Matsumura et al.* in view of *Ruffo et al.*

Independent Claim 16 is directed to a method of producing an absorbent material that includes a mat of dry-laid cellulose fibers integrated with an air-laid non-woven gauze comprised of reinforcing textile fibers. The method includes air forming textile fibers with an air-doffing apparatus on a wire to produce a non-woven gauze, the air-doffing apparatus having at least one carding element. As discussed during the interview and as found at page 6 of the specification, air-forming the textile fibers in this manner produces a porous, easily penetrated gauze. When the cellulose fibers are then directly dry-laid on the newly formed non-woven gauze, the resulting mat achieves a sufficient bonding without any bonding agent.

The deficiencies of *Ruffo et al.* are discussed above. *Matsumura et al.* also fails to disclose or suggest air forming textile fibers with an air-doffing apparatus on a wire to produce a non-woven gauze, the air-doffing apparatus having at least one carding element.

In the *Matsumura* process, a long-fiber forming lap 157 that was previously been suitably opened by carding or the like is advanced between a feed roll 158 and 156. See column 8, lines 24-50. The lap 157 is defibrated by a lickerin roll 154, and the resulting individual fibers are blown downwardly by an air flow and drawn downwardly by a suction box onto an endless wire 119. After the long fibers are deposited, short fibers are distributed on the long fiber layer, and the layers are bonded together by adhesive spraying. See column 8, lines 60-64 and column 9, line 58 - column 10, line 6. *Matsumura et al.* does not air form textile fibers with an air-doffing apparatus having at least one carding element. Further, the *Matsumura et al.* fibrous mat requires spraying with a bonding agent to achieve a sufficient degree of interbonding. See page 4 of the specification and column 9, lines 58-65.

Therefore, even the hypothetical combination of *Ruffo et al.* and *Matsumura et al.* would not result in a method having the features set forth in Claim 16. Accordingly, Claim 16 is patentably distinct over the combined disclosures of *Ruffo et al.* and *Matsumura et al.* Independent Claims 26 and 30 also make clear that the method includes air forming textile fibers with an air-doffing apparatus on a wire to produce a non-woven gauze, the air-doffing apparatus having at least one carding element. Therefore, Claims 26 and 30, and dependent Claims 17-29, 27-28, and 32, are allowable for at least the same reasons that Claim 16 is allowable.

It is also respectfully submitted that independent Claim 1, directed to an absorbent material, is also patentably distinct over the combined disclosures of *Ruffo et al.* and

Matsumura et al. In particular, neither *Ruffo et al.* nor *Matsumura et al.* provides an air-laid non-woven gauze formed with an air-doffing apparatus having at least one carding element to provide a porous, penetrable gauze layer. The advantageous features of the non-woven gauze formed in the claimed manner have been previously described. Accordingly, even the hypothetical combination of *Ruffo et al.* and *Matsumura et al.* would not result in an absorbent material having all of the features of Claim 1.

For at least these reasons, Claims 1-3, 7-10, 29, and 31 are patentably distinct over the combined disclosures of *Ruffo et al.* and *Matsumura et al.*

Accordingly, Applicants respectfully request withdrawal of the rejections of Claims 1-32 under 35 U.S.C. § 102 and § 103.

Information Disclosure Statement

As a final matter, the Examiner is requested to make the Information Disclosure Statement filed on July 18, 2001 of record and to initial and return a copy of the PTO-1449 to the undersigned. A copy of the Information Disclosure Statement, the PTO-1449, the Taiwanese Office Action, and R.O.C. 182120, along with a date-stamped receipt postcard, is enclosed for the Examiner's convenience.

Conclusion

All of the outstanding matters having been addressed, favorable action on the application is requested. Should the Examiner have any questions regarding this Amendment, or regarding the application in general, she is invited to contact the undersigned at the number listed below.

Respectfully submitted,

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